

**MESSAGES, PLANNING AND ACTIVITIES BY ASHA & RDW DURING PREGNANCY
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ABSTRACT

The current study explores some of the messages given by ASHAs to RDWs while including the planning and activities done by both the ASHAs & RDWs regarding the antenatal care of the RDWs. The study also describes the details on the components of Ante Natal Care (ANC) status and the role of ASHAs in availing these ANC components provided to the Recently Delivered Women (RDW) or mothers in four selected districts of UP. From the catchment area of each ASHA, two RDWs were selected who had a child in the age group of 3 to 6 months. Through this profile, the ANC components of RDWs such as measurement of weight, blood pressure, testing of blood and urine, examination of abdomen, knowledge on expected date of delivery and advice on place of delivery including nutrition during pregnancy. Receiving and consumption of Iron and Folic Acid tablets or bottles of syrup, deworming medicines by the RDWs are the other aspects mentioned in the study. Frequency of Tetanus Toxoid injections taken by the RDWs is the other area dealt in the study. All these aspects by the RDWs are reflected upon to give a picture that represents the entire state of UP. The relevance of the study assumes significance as data on the activities and planning of RDWs on their pregnancy is not at all reflected in many surveys. Usually, health workers are interviewed on their knowledge and messages or services they provide for ANCs of recently delivered mothers but data as actually told by RDWs are not available even in large scale surveys like National Family Health Survey 4 done in 2015-16. The coverage for the four ANCs along with other services related to ANC are given for the state and district level in many surveys but there is a significant difference between the services or indicators mentioned in the current study and large-scale surveys like NFHS 4. The current study also gives the data regarding actual activity done by the RDWs (like buying of IFA tablets/bottles of iron syrup) on ANC. All these reasons are attributed to increased MMR in UP. It is noteworthy to mention here that the Maternal Mortality Ratio (MMR) of UP was 201 as per the MMR bulletin of Sample Registration System of May 2018 but currently it is 216 in UP as per the MMR bulletin of SRS in November, 2019 (SRS, 2018 & 2019). A total of four districts of Uttar Pradesh were selected purposively for the study and the data collection was conducted in the villages of the respective districts with the help of a pre-tested structured interview schedule with both close-ended and open-ended questions. In addition, in-depth interviews were also conducted amongst the RDWs and a total 500 respondents had participated in the study. The results showed that the performance of ASHAs in Barabanki and Gonda districts regarding disseminating ANC messages was poor among the four districts. Less importance was given to the message on nutrition during pregnancy. The ASHAs were not distributing the iron tablets to all the pregnant women in the four districts. Regarding iron tablets, the study elicited that 3% of RDWs in Banda and 1% each in the other 3 districts said that they cannot recall how many tablets or syrups they received. None of the districts also showed that all pregnant women consumed IFA tablets. The study also reflected that the ASHAs were not following up the pregnant women properly for the TT shots as part of ANC. The study also showed that the ASHAs had not ensured availability of mother child cards with all the RDWs in all the 4 districts. It also emerged that in Gonda district, only 51% of RDWs and in Barabanki district, 67% of RDWs received deworming medicines but 96% in Banda district and 93% in Saharanpur district received deworming medicines.

KEYWORDS: RDW, ASHA, NRHM, VHSNC, VHND, CHW, EDD.

INTRODUCTION

As RDWs were selected from the catchment area of the ASHAs in the four districts, the following section briefs out the details on ASHAs in UP.

Like India, UP also went through the CHW scheme in 1970s through the introduction of Village Health Guide in 1977 (5th Plan GOI, 1974-79) and the concept was ratified further in the Alma Ata conference of 1978 on primary health care. On the other hand, with the introduction of Integrated Child Development Services in 1975 (5th Plan GOI, 1974-79) the Angan Wadi Workers were in place as CHWs in phases. Simultaneously, local Traditional Birth Attendants were in place since 1977 as CHWs (5th plan, GOI, 1974-79). Thereafter, the multipurpose male and female health workers came in to place through the Child survival and Safe Motherhood program in 1992 (Yearly Plan, GOI, 1992). Besides the sporadic efforts of NGOs putting in place CHWs through their small efforts in definite geographic areas, the cadre of Basic Health Workers were put in by the health system from 1992 till 2005 (GOI, 2005). Gradually the CHWs came here to stay with the introduction of ASHAs in 2005 through the introduction of NRHM (GOI, 2005). As per GOUP, there were 1,50,000 ASHAs in UP in 2019. The selection of RDWs in the four selected districts in this study is dependent on the ASHAs at the respective districts.

This paragraph is a reflection from the content of the various studies mentioned in this article. Studies on RDWs in UP have not covered on aspects like message for proper nutrition during pregnancy, buying of IFA tablets or Iron syrups, frequency of TT injections and receiving of deworming medicines by RDWs. Birth preparedness is a planning activity by the family of the RDW. This message is usually clubbed in many surveys along with the ANC messages. The current study brings this out exclusively. Usually, studies only focus on receiving of the Mother Child Protection card by RDWs but the current study brings out the actual data on TT injections as reported in the card and compares with the information given by the RDWs on TT injections. Hardly, any study collects data on whether the mothers know about their Expected Date of Delivery (EDD) whereas the current study collects data from the mother's mouth itself. Similarly, messages on proper nutrition during pregnancies are clubbed in the broad heading under ANC but the current study brings this information out explicitly. Further, in many studies, the RDWs are not asked about message recollection rather it is the Front-Line Workers who are asked about the message recollection as part of their knowledge assessment. The current study reflects on these aspects in detail as the information is given by the RDWs.

Messages to RDWs in UP

This section details out the contents of the relevant studies in UP like the NFHS 4 in 2015-16, ASHA evaluation in UP in 2011 & 2013, Vistaar project in

2012. These are the relevant studies that incorporates the messages, planning and activities done and given during pregnancy to the RDWs.

A study done in UP regarding the performance of ASHA mentions that the messages given to women by ASHAs during pregnancy are during the group discussions. The average number of group discussions per ASHA in the previous 3 months from the time of the study states that 3 meetings were conducted on health issues, 2 meetings each were on nutrition and sanitation issues and 3 meetings on the issue of family planning. Regarding the coverage of these discussions, it also mentions that 98% of ASHAs conducted group talks or discussions in last 3 months from the time of survey in their work areas. While eliciting about the knowledge of ASHAs on the messages, it discovers that more than 90% of ASHAs replied that they were clear about the messages to be given at the community level (Bajpai N, Dholakia R, 2011). It is significant to note that there is no data collected from the beneficiaries on actual messages given to them.

The project close-out report of Vistaar project (2006-2012) of United States Agency for International Development (USAID) of UP mentions on the upgradation of the quality of Village Health and Nutrition Days (VHND) now called Village Health Sanitation & Nutrition Days (VHSND). These are the outreach convergence platforms to provide ANC services and messages. that nutrition and anemia related knowledge among pregnant women and recently delivered women improved. It also mentions that the project implementation increased the reach of nutritional counselling to the recently delivered women. The report also mentions increased receipt and consumption levels of iron and folic acid tablets. (EOP report, Vistaar project, 2013).

The meetings by the VHSNC are the platforms to disseminate the messages at community level. This is cited in an evaluation study of ASHA scheme in UP which states that in the Village Health Sanitation & Nutrition Committee (VHSNC) meetings, 51.66% of ASHAs discussed on immunization, 33.8% on balanced diet & nutrition and 20.5% on potable water. To add to that, 98.9% of ASHAs provide ANC services as support services in UP (GOUP,2013).

The National Family Health Survey report written in 2017 for UP states that ANC service components coverage in UP has 63.5% of pregnant women weighed, 63.9% had their blood pressure measured, 65.2% gave their urine samples, 63.7% gave their blood samples and 79.8% had their abdomen examined. The report states that only 8% of mothers took a drug for intestinal parasite. It is significant to note that 52% of women are anaemic in UP and 1% are severe anaemic. Regarding Mother Child Protection (MCP) card, the report mentions that 80% of registered pregnancies received a

MCP card. On the message aspect, the report states that among the women with a live birth in the five years preceding the survey who met with a community health worker in the last three months of pregnancy for their most recent live birth, the advices were better percolated. The report details that at least two-fifths of these women received advice on five different areas in UP. Here, 63% of these two-fifths received on importance of institutional delivery, 56% on breast feeding, 48% on cord care, 47% on keeping the baby warm and 43% on family planning. (NFHS 4, 2015-16).

The following table gives the coverage of the ANC service components for each of the selected district of the study as per the NFHS 4 data. The data shows very low coverage of IFA tablets consumption. It also reflects that services like TT, IFA and receiving of Mother Child Protection (MCP) card are common to the current study for the district level and in addition to these indicators, the state level had indicators like weighing, measuring blood pressure, MCP card and abdomen examination that are common to the current study.

Table 1: ANC coverage in the four selected districts of the study.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|---|------------------|----------------------|------------------|-----------------------|
| Percentage of mothers who had 4 or more ANC visits | 6.4 | 23.6 | 13.5 | 41.7 |
| Percentage of mothers with an ANC visit in the first trimester of pregnancy | 31.2 | 45.8 | 20.7 | 75.2 |
| Percentage of mothers who took IFA tablets for at least 100 days | 6.8 | 9.9 | 5.9 | 14.6 |
| Percentage of mothers who received two or more TT injections | 82.4 | 71.7 | 65.8 | 88.9 |
| Percentage of mothers who had full ANC coverage | 1.8 | 3.6 | 2.0 | 8.7 |
| Percentage of mothers who received a Mother Child Protection Card | 88 | 86.8 | 74.1 | 70.8 |

Source- NFHS-4, 2015-16.

Research Methodology

Using purposive sampling technique, four districts were chosen from the four different economic regions of UP, namely Central, Eastern, Western and Bundelkhand. Further, the Government of UP in 2009 categorized the districts as per their development status using a composition of 36 indicators. Through purposive sampling, the high developed district chosen for the study is Saharanpur from the western region, the medium developed district chosen for the study is Barabanki from the central region, the low developed district chosen for the study is Gonda from the eastern region and the very low developed district chosen for the study is Banda from the Bundelkhand region (GOUP, 2009).

In the next step, purposefully two blocks were selected from each of the district and all the ASHAs in these blocks were chosen as the universe for the study. From the list of all the ASHAs in each of the two blocks, 31 ASHAs were chosen randomly from each block for the study. In this way, 62 ASHAs were chosen for the study from each of the districts. In Gonda district, 64 ASHAs were selected to make the total number of ASHAs for the study to 250. From the catchment area of each ASHA, two Recently Delivered Women (RDW) were chosen who had a child in the age group of 3-6 months during the time of the data collection for the study. In this way, 124 RDWs from three districts and 128 RDWs from Gonda district were chosen thus a total of 500 RDWs were selected for the study.

The following figure shows the four districts of UP in the map of the state of UP.



The data was analyzed using Statistical Package for Social Sciences (SPSS) software to calculate the percentage and absolute values of RDWs availing various services during their pregnancy, Receiving & consumption of iron and folic acid tablets, deworming tablets were the other aspects analyzed. The receiving of tetanus toxoid injections and the frequency of their doses were also analyzed. Data pertaining to proper nutrition during pregnancy and knowledge about Expected Date of Delivery (EDD) that were unique to the study were also quantified. The detail profiles of all the messages and activities by the RDWs as per the data collected in the four study districts were collated. The

quantitative data related to the profiles mentioned above was seen for the selected 500 RDWs which they received from the health personnel. All these indicators form the basis of the ensuing results and discussion.

Research tool

The RDWs were interviewed using an in-depth, open-ended interview schedule which included a section on variables on Ante Natal Care. Under the third section of the tool, one question (number 311-317 of the tool) was regarding the ANC services of RDWs. Question number 312 of the tool was regarding whether the RDWs received IFA tablets or syrups. The next question was on the number of IFA tablets or bottles of syrup received or bought by RDWs. The next was on the number of tablets or bottles of syrup consumed by the RDWs. The issue moves to TT injections received by RDWs, frequency of these injections as reported by them or from the entries in the Mother Child Protection card. Finally question number 317 deals with the receiving of de-worming medicines by RDWs. The number of research tools used for the study were 500 to interview 500 recently delivered women who had a child in the age group of 3 to 6 months during the survey. The following section

details out the results and discussions related to the study.

RESULTS AND DISCUSSIONS

This section has seven tables where the first one is regarding the ANC services of RDWs that they received. These are weight, measurement of blood pressure, testing of blood and urine, abdominal examination, knowledge about Expected Date of Delivery (EDD), advice to plan the place of delivery and nutrition during pregnancy. The second table is regarding the role of the RDWs in ANC services like purchasing of Iron & Folic Acid tablets or getting the tablets free of cost. The third table is regarding the number of tablets or amount of syrups that the RDWs received and the fourth is regarding the number of tablets or bottles they consumed. about the health personnel working in the community. The fifth table is regarding the percentage of women receiving TT injections including the frequency of these injections. The next table is on the frequency of TT injections of RDWs as reflected in their Mother Child protection cards. The last table is regarding the de-worming medicines received by the RDWs.

Table 2: ANC services received by RDWs.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|--|------------------|----------------------|------------------|-----------------------|
| Percentage of RDWs who received or did services related to ANC at least once | | | | |
| Weighed | 98.3 | 98.3 | 47 | 100 |
| Measured blood pressure | 90 | 19 | 26 | 82 |
| Got the urine tested | 55 | 2 | 43 | 42 |
| Got the blood tested | 84 | 7 | 77 | 72 |
| Abdominal examination done | 82 | 73 | 48 | 97 |
| Knew their EDDs | 88 | 26 | 54 | 88 |
| Was advised to deliver in a hospital or health facility | 65 | 0 | 48 | 61 |
| Informed about proper nutrition during pregnancy | 6 | 0 | 56 | 58 |

This table was regarding the ANC services received or the ANC related activities done by the RDWs at least once. The first ANC service was weighing of the pregnant women. In Gonda, only 42% of RDWs were weighed as against 98% of RDWs each in Banda and Barabanki and 100% in Saharanpur. 82% of RDWs in Saharanpur and 90% in Banda got their blood pressure measured but only 19% in Barabanki and 20% in Gonda could get this service.

While Barabanki had only 2% of RDWs who got their urine tested it was 42% in Saharanpur, 43% in Gonda and 55% in Banda. Only 7% of RDWs got their blood test done in Barabanki and 77% and 72% RDWs got it done in Saharanpur and Gonda. The maximum percentage was in Banda where 84% of RDWs got the blood tested. Regarding abdominal examination, Saharanpur led with 97% followed by 82% in Banda and 73% in Barabanki. Only 48% of RDWs got this service in Gonda. 88% of RDWs each in Banda and Saharanpur

knew their EDDs but only 54% in Gonda and 26% in Barabanki knew their EDDs.

While none of the RDWs were advised to deliver in a hospital or health facility in Barabanki only 48% received this advice in Gonda followed by 61% in Saharanpur and 65% in Banda. Information on proper nutrition during pregnancy was received by only 6% in Banda while no RDW received this message in Barabanki. The other 2 districts stood at 56% in Gonda and 58% in Saharanpur.

Thus the performance of ASHAs in Barabanki and Gonda regarding disseminating ANC messages was poor among the four districts. Less importance was given to the message on nutrition during pregnancy there by leading to poor maternal nutrition.

Table 3: Percentage of RDWs who bought or were given iron tablets/syrups during pregnancy

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|--|---------------|-------------------|---------------|--------------------|
| Got free of cost | 94.4 | 89.5 | 93 | 100 |
| Purchased | 0.8 | 1.6 | 7 | 0.0 |
| Got some tablets free of cost and some purchased | 0.0 | 1.6 | 0.0 | 0.0 |
| Neither got any free of cost nor bought any | 4.8 | 7.3 | 0.0 | 0.0 |

Regarding distribution/consumption of iron tablets among pregnant women, in all the 4 districts the data showed that all the RDWs in Saharanpur got the tablets free of cost and 93% in Gonda and 94% in Banda also got it free of cost. 90% of RDWs in Barabanki got the tablets free of cost which meant there was poor supply and distribution of iron tablets in Barabanki district.

The ASHAs were not distributing the iron tablets to all the pregnant women. 7% of RDWs purchased the tablets in Gonda, 1.6% RDWs purchased in Barabanki and only one RDW purchased in Banda. In Barabanki, 1.6% RDWs replied that they purchased some tablets and some they got free of cost. 7% RDWs in Barabanki and 5% in Banda replied that they neither got any tablets free of cost nor bought any tablets.

Table 4: Percentage of RDWs and the number of IFA tablets or bottles of iron syrup they received during pregnancy.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|--------------------|---------------|-------------------|---------------|--------------------|
| No tablets/syrup | 2.5 | 3 | 3 | 0 |
| 1-50 tablets | 1.6 | 17 | 17 | 2.4 |
| 51-100 tablets | 93 | 79 | 79 | 96.8 |
| Do not recall | 2.9 | 1 | 1 | 0.8 |

Next section was on the number of IFA tablets or syrups the RDWs received during pregnancy. While in Saharanpur all the RDWs received tablets or syrups there were 3% RDWs in the other 3 districts who said that they did not receive any tablet or syrup. 17% of RDWs each in Barabanki and Gonda received IFA tablets while it

was only 2% in Saharanpur and 1.6% in Banda. 97% in Saharanpur, 93% in Banda and 79% each in Gonda and Barabanki received IFA tablets or syrups. 3% of RDWs in Banda and 1% each in the other 3 districts said that they cannot recall how many tablets or syrups they received.

Table 5: Percentage of RDWs and the number of IFA tablets or bottles of iron syrup they consumed during pregnancy.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|--------------------|---------------|-------------------|---------------|--------------------|
| No tablets/syrup | 14.5 | 6.4 | 6 | 2.4 |
| 1-50 tablets | 14.5 | 34.6 | 45 | 17 |
| 51-100 tablets | 68.5 | 50 | 49 | 80.6 |
| Do not recall | 2.5 | 9 | 0.0 | 0.0 |

Next part was on the consumption of IFA tablets or syrups. 15% of RDWs in Banda, 6% each in Barabanki and Gonda and 2% in Saharanpur said that they did not consume any tablets/syrups during pregnancy. 45% in Gonda, 35% in Barabanki, 17% in Saharanpur and 15% in Banda told that they had consumed 1-50 tablets of IFA. Similarly, 81% in Saharanpur, 61% in Banda and 50% each in Gonda and Barabanki districts consumed 51-100 tablets. 9% in Barabanki and 3% in Banda told that they cannot recall. So it was seen that only 50% of

RDWs in Gonda and Barabanki district were consuming the IFA tablets and in Banda 40% of RDWs were not consuming the tablets while 20% were not consuming in Saharanpur. None of the districts showed that all pregnant women consumed IFA tablets. This showed that during home visits, the aspect of IFA tablets was not discussed during home visits by ASHAs as more percentage of women were receiving the tablets but not consuming. This was why maternal anemia continues to be a causal factor in maternal mortality.

Table 6: Percentage of RDWs who received TT injection during their pregnancy.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|---|---------------|-------------------|---------------|--------------------|
| Received TT injection | 99 | 94.3 | 97.6 | 100 |
| Percentage of RDWs reporting the number of times they have received TT injections | | | | |
| Once | 0.8 | 99.2 | 96.1 | 0.0 |
| Twice | 99.2 | 0.0 | 0.0 | 98.3 |
| Do not recall | 0.0 | 0.8 | 3.9 | 1.7 |

Regarding TT injections, in all the 4 districts more than 94% of RDWs said that they received the injection during pregnancy. Regarding the number of times the RDWs received TT injections, we found that in Gonda 96% received it once while all the RDWs received it in Barabanki and only 1% received in Banda.

All the RDWs in Banda received the injection twice while 98% received twice in Saharanpur. 1% in

Barabanki, 4% in Gonda and 2% in Saharanpur replied that they were not able to recall. It was seen that most of the RDWs were attending the VHND sessions and getting the TT shots twice during their pregnancy in Banda and Saharanpur while it was only one shot for most RDWs in Gonda. This again showed that the ASHAs were not following up the pregnant women properly for the TT shots as part of ANC.

Table 7: Percentage of RDWs received the number of times TT injections as reported in the mother child card

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|--------------------|---------------|-------------------|---------------|--------------------|
| Once | 0.8 | 0.0 | 45.3 | 0.8 |
| Twice | 75 | 66.9 | 20.3 | 65.3 |
| Card not available | 24.2 | 33.1 | 34.4 | 33.9 |

When we saw the data for the TT shots as mentioned or reported in the mother child card, there was a disparity with the data what had been reported by the RDWs. 96% RDWs in Gonda reported that they received the TT injection once but only 45% of RDWs had it reported in the card. Similarly, there was one card in Saharanpur showing that the RDW had received the TT injection. Regarding twice, the percentage in Banda had reduced as 99% reported but 75% RDWs had cards reporting TT. In Gonda and Barabanki none of the RDWs said that they had received the TT injection but 67% of RDWs in Barabanki and 20% in Gonda had cards that showed that they had received the TT injections. Saharanpur had 65%

of RDWs who had cards mentioning that they had received the TT injections but 98% had said that they had received TT injections twice. Across the 4 districts when we saw the availability of the cards with RDWs, Banda had 24%, Barabanki had 33%, Gonda and Saharanpur had 34% of RDWs who did not have the cards available with them. This showed that the ASHAs had not ensured availability of mother child cards with all the RDWs in all the 4 districts. However, the card as a valid source showed that the coverage of 2 TT injections among RDWs was better in 3 districts except Gonda where only 20% of RDWs received 2 TT injections.

Table 8: Percentage of RDWs who received deworming medicines during pregnancy.

| Names of districts | Banda (N=124) | Barabanki (N=124) | Gonda (N=128) | Saharanpur (N=124) |
|------------------------------|---------------|-------------------|---------------|--------------------|
| Received deworming medicines | 95.9 | 66.9 | 50.7 | 92.7 |

The next part in the table was regarding the RDWs receiving deworming medicines during pregnancy. In Gonda only 51% of RDWs and in Barabanki 67% of RDWs received deworming medicines but 96% in Banda and 93% in Saharanpur received deworming medicines.

That meant even if in Gonda and Barabanki district the RDWs consumed IFA tablets, they would be in risk for having maternal anemia as all the RDWs were not consuming deworming medicines. The intestinal worms also contributed to poor maternal nutrition.

CONCLUSIONS

The above results showed that the profile of the ANC messages of RDWs vary a lot across the districts. Importance is not given to the message on nutrition during pregnancy. Similarly, distribution of the iron tablets or bottles of syrup to all the pregnant women in the four districts were also poor. Similar is the case regarding consumption of these tablets as none of the districts showed that all pregnant women consumed IFA tablets. The study also recommends that the ASHAs need to follow up the pregnant women properly for the messages during pregnancy.

The study also recommends that the ASHAs should ensure availability of mother child cards with all the RDWs. It also recommends that all RDWs receive deworming medicines during pregnancy to ward off anemia.

The process should also focus on involving all the stakeholders and the ANC services and messages of RDWs should be done holistically. This strategy will help to bring maternal health as a priority. Data should be collected in large scale surveys on these parameters of ANC messages from RDWs as they can give crucial information regarding maternal health. The inclusion of effective role of all types of health personnel regarding ANC services and messages would help in augmentation of better outreach services regarding maternal health.

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